

62
Zetta

Sold to: REAL S/A - Transportes Aereos and
Express de Transportes Aerovias Brazil S/A

Date: 19 August 1959

*Revised: 24 August 1959

SO No: 880-14-15

Reference: (a) Division and General Office Meeting
19 August 1959.

WO No: 32,000 Series

CONVAIR 880 - REALREAL vs CONVAIR 880 WORK STOPPAGE

- (1) All departments concerned are directed to immediately stop work authorized by Sales Orders 880-14-1 through -14, covering the manufacture of three (3) Convair 880 (Model 31 aircraft).
- (2) ~~Engineering and Tooling Departments~~ will continue design activities related to ~~loading edge~~ ~~ices~~ insofar as such activities applies to Model 22 aircraft.
- (3) An investigation is being conducted concerning the amount of work that has been accomplished covering the design, release, procurement and manufacture of seat tracks for Model 31 aircraft and to determine how much of this task is applicable to Model 22 and Model 30 aircraft.
- (4) Steps are being taken to substitute either a modified Model 22, or Model 30, for the REAL Model 31. Results of this action will be the subject of a subsequent sales order.
- (5) Production will continue Model 22 main landing gear tests to Model 31 load requirements.

RECEIVED

AUG 27 '59

D. H. Digges

Manager of Commercial Contracts
PROJECT
SPEC.
GROUP

*Revised to add Para. (5).

C O N V A I R
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

31 August 1959

No. 14
Model. 31-14

Ref: (a) S. O. 880-14-15 dated 19 August 1959

REAL - CONVAIR 880 WORK STOPPAGE

All departments concerned are directed to immediately stop work authorized by Sales Orders 880-14-1 through -17, covering the manufacture of three (3) Convair 880 Model 31 aircraft.

Engineering and Tooling Departments will continue design activities related to leading edge devices insofar as such activities apply to Model 22 aircraft.


An investigation is being conducted concerning the amount of work that has been accomplished covering the design, release, procurement and manufacture of seat tracks for Model 31 aircraft and to determine how much of this task is applicable to Model 22 and Model 30 aircraft.

Steps are being taken to substitute either a modified Model 22, or Model 30, for the REAL Model 31. Results of this action will be the subject of a subsequent Sales Order.

Production will continue Model 22 main landing gear tests to Model 31 load requirements.

ACTION: All concerned are authorized to proceed with the above.

JIR:JMC:is


J. T. Ready, Jr.
Project Engineer
6-115

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SEP 2 '59

PROJECT
SPEC.
GROUP

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes 'erovias Brazil S/A

Date: 4 August 1949

Reference: (a) Letter dated July 17, 1959, Alvarenga to
Thomas B. Eastland, Jr.

SO No: 880-14-14

(b) MCL 71,096

WO No: 32,000 Series

CONVAIR 880 - REAL

INSTALLATION OF GOODYEAR TIRES - REAL 880 AIRCRAFT

- (1) REAL has requested by Reference (a) the installation of Goodyear tires on their three (3) 880 aircraft inasmuch as tires in the specification are called out by type and not make.
- (2) All concerned are hereby authorized to proceed with the above change.
- (3) This change does affect the guaranteed weight empty but does not affect the contract price.


HBD/ho

Log No. 2081


D. H. Digges
Manager of Commercial Contracts

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes Aerovias Brasil S/A

Date: 9 July 1959

Reference: (a) Letter 10-0-1724 with attachment,
B. F. Coggan to Alvarenga, dated
27 May 1959.
(b) MCL 71,079

SO No: 880-14-13

WO No: 32,000 Series

CONVAIR 880 - REAL

INSTALLATION OF WING ILLUMINATION LIGHTS AND TAXI TURN-OFF LIGHTS

- (1) REAL has accepted by Reference (a) the installation of wing illumination lights and taxi turn-off lights as described in Reference (b). Accordingly, Engineering is authorized to proceed with the design of the above MCL for the Model 31-14 aircraft.
- (2) Costs will be recovered from the customer as soon as firm prices are received from Engineering.

HBD/hs

Log No. 1803


D. H. Digges
Manager of Commercial Contracts

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes Aerovias Brasil S/A

Date: 9 July 1959

Reference: (a) Letter 10-0-1724 and attachment,
B.F. Coggan to Alvarenga, dated
27 May 1959.

SO No: 880-14-12

WO No: 32,000 Series

(b) MCL 71,080

CONVAIR 880 - REAL

INSTALLATION OF COMPLETE 2nd HF COMMUNICATION SYSTEM

- (1) REAL has accepted by Reference (a) the installation of a second complete HF communication system as called out in Reference (b). Accordingly, Engineering is authorized to proceed with the design of the above MCL for the Model 31-14 aircraft.

HBV;hs

Log No. 1797


D. H. Digges
Manager of Commercial Contracts

CONVAIR
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

16 July 1959

No. 13
31-14

Reference: {a} S.O. 880-14-13, dated 9 July 1959
 {b} MCL No. 71,079

Installation of Wing Illumination Lights and Taxi Turn-off Lights.

REAL has accepted, as evidenced by reference (a), our proposal prepared in accordance with reference (b).

This installation will be similar to Swissair, consequently, common release of Swissair engineering will satisfy this requirement.

This change is incorporated in the Sales Configuration.

ACTION: All concerned are directed to proceed with the above.

JTR:JMC:gm

 7/19
J. T. Ready, Jr.
Project Engineer
Mail Zone 6-115

CONVAIR
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

13 July 1959

No. 9
Model. 31-14

Reference: (a) S. O. 880-14-12 dated 9 July 1959
(b) MCL No. 71,080

INSTALLATION OF COMPLETE 2ND H. F. COMMUNICATION SYSTEM

REAL has accepted, as evidenced by Reference (a), the installation of a second complete HF Communication System as called out in Reference (b), MCL 71,080.

The task is as follows:

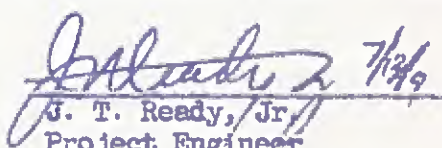
- A) Install second HF Communication Receiver/Transmitter and Power Supply on electronic rack common to 31-13.

OSP Collins 618S-1 Transmitter/Receiver
OSP Collins 416W-3 Power Supply
- B) Install second HF Communication Coupler Control, Mount and Antenna Coupler, common to Model 31-13.
- *C) Delete HF Communication Control panel from fwd. pedestal. Add blank panel.
- *D) Install HF Communication control panel in overhead switch panel.
- E) Revise one (1) harness. Remainder of HF Communication #2 common release Swiss-air.
- F) Mock-up of Control Panel harness required
- G) Model specs change required.
- H) Bench test of equipment required.
- I) Isometrics revision required.

*Items C and D are also included in the task under MCL 31-71,061. If it is sold, the items will not be necessary to this task.

ACTION: All concerned are authorized to proceed with the above. Specifications Group to forward revised specification pages to Contracts within four weeks of Sales Order date.

JTR:JMC:is


J. T. Ready, Jr.
Project Engineer
6-115

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes Aeroviao Brasil S/A

Date: 9 July 1959

SO No: 880-14-11

Reference: (a) Letter 10-0-1724 and attachment
B. F. Coggan to Alvarenga, dated
27 May 1959
(b) MCL 71,075 dated 3 June 1959
(c) Swissair MCL 31-70,116 dated
11 May 1959

WO no: 32,000 Series

CONVAIR 880 - REAL

PERISCOPIC SEXTANT PROVISIONS

- (1) REAL has accepted by Reference (a) provisions for periscopic sextant as called out in Reference (b), revised 9 July 1959. This system will be identical to the Swissair version as in Reference (c). Accordingly, Engineering is authorized to proceed with the design of the above MCL for the Model 31-14 aircraft.
- (2) Costs will be recovered from the customer as soon as firm prices are received from Engineering.

HBD/hs *117*

Log No. 1802

[Signature]
D. H. Digges
Manager of Commercial Contracts

CONVAIR
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

16 July 1959

No. 12
31-14

Reference: (a) S.O. 880-14-11, dated 9 July 1959
(b) MCL No. 71,075
(c) Swissair MCL No. 70,116

Periscopic Sextant Provisions.

REAL has accepted, as evidenced by reference (a), our proposal prepared in accordance with reference (b),

This installation will be similar to Swissair, consequently, common release of Swissair engineering will satisfy this requirement.

This change is not to be incorporated in the Sales Configuration.

ACTION: All concerned are directed to proceed with the above.

JTR:JTC:gn

 7/25/59
J. T. Ready, Jr.
Project Engineer
Mail Zone 6-115

CONVAIR - SD

~~W. F. Digges~~
6-122
SALES ORDER

Sold to: REAL S/A - Transportes Aereos
and Empresa de Transportes Aerovias
Brasil S/A
Sao Paulo, Brasil

Date: 13 July 1959

SO No: 880-14-10

WO No: 32,000 Series

Reference: (a) Letter 10-0-1724 and
attachment, B.F. Coggan to
Alvarenga, dated 27 May 1959.
(b) MCL 71,059.

REVISIONS TO AVIONICS EQUIPMENT

REAL 880

- (1) REAL has requested, as set forth in reference (a), installation of Bendix LPA 71 ADF Loop Antenna as called out in reference (b). Accordingly, Engineering is authorized to proceed with the design of the above MCL for Model 31-14 aircraft.
- (2) Costs in connection with this sales order will be recovered from the customer as soon as firm prices are received and negotiated.

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JUL 14 '59

PROJECT
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HBD:hs

Log No. 1817


D. H. Digges
Manager of Commercial Contracts

C O N F I D E N T I A L
A Division of General Dynamics Corporation
(San Diego)

7/13

REAL MINUTES

16 July 1959

No. 11
31-14

Reference: (a) S.O. 880-14-10, dated 13 July 1959
(b) MCL No. 71,059

Revisions to Avionics Equipment.

REAL has requested, as set forth in reference (a), installation of Bendix LPA 71 ADF Loop Antenna as called out in reference (b).

The task is as follows:

- A. Revise shape of pressure pans (2) locally at fuselage stations 565 and 527 on centerline of airplane to accommodate shape of antenna.
- B. Revise cutouts in pan to accommodate antenna attachment to pan.
- C. Revise tee intercostal on flame bottom centering at stations 565 and 527.

NOTE: Above changes occur locally on bottom centerline at fuselage Stations 565 and 527 and change extends approximately 3" on both sides of centerline (Ref: Dwg. #22-72115).

- D. Install Bendix Loop Antenna and mounting bracketry similar to TWA and Delta.
- E. Install Bendix GMA-71 Goniometer in Radio Rack area.
- F. Delete two (2) ADF Loop Transmission Lines.
- G. Install two (2) Goniometer Transmission Lines (From Antenna to Goniometer to black box).

NOTE: Goniometer Transmission Lines are furnished by Vendor.

ACTION: All concerned are directed to proceed with the above.

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JUL 21 '59

PROJECT
SPEC.
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JTR:JMC:gm

J. T. Ready, Jr.
J. T. Ready, Jr.
Project Engineer
Mail Zone 6-115

7/21/59

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes Aerovias Brasil S/A
Sao Paulo, Brasil

Date: 13 July 1959

SO No: 880-14-9

Reference: (a) Letter 10-0-1724 and attachment,
B.F. Coggan to Alvarenga, dated
27 May 1959.
(b) MCL 71,055.

WO No: 32,000 Series

REVISIONS TO AVIONICS EQUIPMENT

REAL 880

- (1) REAL has requested, as set forth in Reference (a), revisions to avionics equipment as called out in Reference (b). Accordingly, Engineering is authorized to proceed with the design of the above MCL for Model 31-14 aircraft.
- (2) Costs in connection with this sales order will be recovered from the customer as soon as firm prices are received and negotiated.

HRD:hs

Log No. 1818

for Thomas Hartland
D. H. Digges
Manager of Commercial Contracts

C O N V A I R
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

16 July 1959

No. 10
31-14

Reference: (a). S.O. 880-14-9, dated 13 July 1959
(b). MCL No. 71,055

Revisions to Avionics Equipment.

REAL has requested, as set forth in reference (a), revisions to avionics equipment called out in reference (b).

A. REAL has requested complete provisions for single Bendix Raw Doppler.

Task is as follows consisting of common releases of Swissair drawings:

1. Use Swissair circuits and install Swissair harnesses.
2. Install Swissair shelf "F", Waveguide installation, R/T unit mounting provisions.

B. REAL has requested complete provisions for Mark I Navigational Computer.

Task is as follows consisting of common releases of Swissair drawings:

1. Use Swissair circuits and install Swissair harnesses.
2. Install Swissair shelf "F" (same as A above).

ACTION: All concerned are directed to proceed with the above.

JTR:JIC:gm


J. T. Ready, Jr.
Project Engineer
Mail Zone 6-115

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes Aereovias Brazil S/A

Date: 29 June 1959

Reference: (a) Letter 10-0-1724 and attachment
B. F. Coggan to Alvarenga, dated
37 May 1959

SO No: 880-14-3

WO No: 32,000 Series

(b) REAL MCL 71,069

DELETION OF CONVAIR FURNISHED BUFFETS AND
INSTALLATION IN LIEU THEREOF CUSTOMER FURNISHED BUFFETS

REAL 880

- (1) REAL has requested by Reference (a) the deletion of Convair furnished buffets and in lieu thereof installation of customer furnished buffets as described in Reference (b). Accordingly, Engineering is authorized to proceed with the design of the above MCL for Model 31-14 aircraft.
- (2) Costs in connection with this sales order will be recovered from the customer as soon as firm prices are received from Engineering.

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JUL 10 '59

PROJECT
SPEC.
GROUP

HBD/hc

Log No. 1725

for *Thomas J. Digges*
D. H. Digges
Manager of Commercial Contracts

CONVAIR
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

6 July 1959

Revised 20 July 1959

No. 8
Model. 31-14

Reference: (a) S. O. 880-14-8 dated 29 June 1959
(b) MCL No. 71,069

DELETION OF CONVAIR FURNISHED BUFFETS AND INSTALLATION IN LIEU
THEREOF CUSTOMER FURNISHED BUFFETS

REAL has requested, as evidenced by Reference (a), the deletion of Convair furnished buffets and an installation of customer furnished Convair installed buffets.

The task is as follows:

Delete customer furnished buffets, make structural provisions for four (4) customer furnished buffets and install customer furnished buffets. #1 unit in R. H. side of aircraft forward of forward service door. #2 unit to be on R. H. side of aircraft aft of forward service door, #3 unit to be on R. H. side of aircraft aft of the aft service door and #4 unit to be on L. H. side of aircraft aft of aft entrance door. Fourth stewardess seat to be installed on Galley #4. Coat compartments located aft of left entrance door to be removed. Convair to prepare galley coordination drawing.
14 KW power to be provided at no charge to customer.

No action in connection with these Minutes is required.

ACTION:

See REAL Minutes #4 for Engineering action.

JTR:is

J. T. Ready, Jr. 7/9/59
J. T. Ready, Jr.
Project Engineer
6-115

JTR 7/21/59

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes Aereos Brazil S/A
Sao Paulo, Brazil

Date: 29 June 1959

SO No: 880-14-7

Reference: (a) Letter 10-0-1724 and attachment
B. F. Coggan to Alvarenga, dated
27 May 1959
(b) REAL MCL 71,081
(c) Swissair MCL 70,003

WO No: 32,000 Series

PRESSURE RATIO SYSTEM

REAL 880

- (1) REAL has requested by Reference (a) a revision to pressure ratio system as described in References (b) and (c). Accordingly, Engineering is authorized to proceed with the design of the above MCL's for Model 31-14 Aircraft.
- (2) Costs in connection with this sales order will be recovered from the customer as soon as firm prices are received from Engineering.

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JUL 10 '59

PROJECT
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17/10/59

17/10/59

for Thomas Barclay
D. H. Digges
Manager of Commercial Contracts

C O N V A I R
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

6 July 1959

No. 7
Model. 31-14

Reference: (a) S. O. 880-14-7 dated 29 June 1959
(b) MCL No. 71,081
(c) MCL No. 70,003

PRESSURE RATIO SYSTEM

REAL has requested, as evidenced by Reference (a), a revision to the pressure ratio as described in MCL 71,081, Reference (b) and MCL 70,003, Reference (c).

The task is the same as described in MCL 22-10,176. Therefore, the following instruments will be common released:

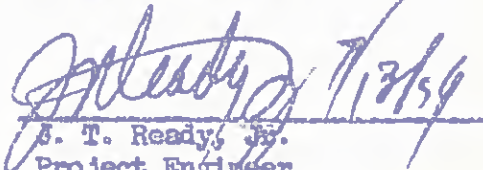
Add (4) Pressure ratio indicator (Kollman #A31537-10-001)
Delete (4) Pressure Ratio indicators (#A29187-10-001)

Rohr Task:

Delete (4) Pressure ratio transmitters and mtg. brackets. (A31351-00-025).
Procure and install (4) Kollman (#A27790-00-001) pressure ratio transmitters and mtg. brackets.

ACTION: All concerned are authorized to proceed with the above.

JTR:JMC:is


S. T. Ready, Jr.
Project Engineer
6-115

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Emprese de Transportes Aerovias Brasil S/A
Sao Paulo, Brasil

Date: 22 June 1959

SO No: 880-14-6

Reference: (a) Letter 10-0-1724, and attachment,
B.F. Coggan to Alvarenga, dated
27 May 1959.
(b) MCL 71,077

WO No: 32,000 Series

CONVAIR 880 - REAL

INSTALLATION OF FUEL DRIP STICKS

- (1) REAL has accepted by Reference (a) the inclusion of fuel drip sticks as described in Reference (b). Accordingly, Engineering is authorized to proceed with the design of the above MCL for the Model 31-14 aircraft.
- (2) Costs will be recovered from the customer as soon as firm prices are received from Engineering.

HPD:hs

Log No. 2654

RECEIVED
JUN 25 '59
PROJECT
SPEC.
GROUP
for Thomas J. Digges
D. H. Digges
Manager of Commercial Contracts

C O N V A I R
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

6 July 1959

No. 6
Model. 31-14

Reference: (a) S. O. 880-14-6 dated 22 June 1959
(b) MCL No. 71,077

INSTALLATION OF FUEL DRIP STICKS

REAL has accepted, as evidenced by Reference (a), the inclusion of fuel drip sticks as described in Reference (b).

This installation is the same as that designed for Swissair, except calibration shall be in pounds in lieu of kilos.

ACTION: All concerned are authorized to proceed with the above.

JFR:JMC:is


J. T. Reedy, Jr.
Project Engineer
6-115

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Empresa de Transportes Aerovias Brasil S/A
Sao Paulo, Brasil

Date: 22 June 1959

SO No: 880-14-5

Reference: (a) Letter 10-0-1724 and attachment,
B.F. Coggan to Alvarenga, dated
27 May 1959.
(b) MCL 71,076

WO No: 32,000 Series


CONVAIR 880 - REAL,

REVISION TO AIRCRAFT FIRE DETECTION SYSTEM

- (1) REAL has accepted by Reference (a) a revision to the aircraft fire detection system which provides for the installation of a Fenwal single loop fire detection system, as described in Reference (b), in lieu of double loop system. This system will be identical to the Swissair version. Accordingly, Engineering is authorized to proceed with the design of the above MCL for the Model 31-14 aircraft.
- (2) Costs will be recovered from the customer as soon as firm prices are received from Engineering.


HBD:hs

Log No. 1656


for D. H. Digges
Manager of Commercial Contracts

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JUN 25 '59

PROJECT
SPEC.
GROUP

CONVAIR
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTERS

6 July 1959

No. 5
Model. 31-14

Reference: (a) S. O. 880-14-5 dated 22 June 1959
(b) MEL No. 71,076


REVISION TO AIRCRAFT FIRE DETECTION SYSTEM

REAL has accepted, as evidenced by Reference (a), a revision to the aircraft fire detection system which provides for the installation of a Fenwall single loop fire detection system, Reference (b), in lieu of double loop system.

The system will be identical to the Swissair version.

ACTION: All concerned are authorized to proceed with the above.

JIR:UMF:is

 7/7/59
J. H. Ready, Jr.
Project Engineer
6-115

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Expressa de Transportes Aerovias Brasil S/A
Sao Paulo, Brasil

Date: 12 June 1959

SO No: 880-14-4

Reference: (a) Letter 10-0-1724 and attachment, B. F.
Coggan to Alvarenga, dated 27 May 1959
(b) MCL 31-71,069

WO No: 32,000 Series

CONVAIR 380 - REAL

REVISION TO AIRCRAFT BUFFETS

- (1) REAL has accepted by Reference (a), revision to aircraft buffet arrangements as described in Reference (b). Accordingly, Engineering is authorized to proceed in accordance with the above MCL for Model 31-14 Aircraft.
 - (2) Costs will be recovered from the customer as soon as firm prices are received from Engineering.
- /

HBD/hc

HD
Hm
Log No. 1576

for Thomas G. Digges
D. H. Digges
Manager of Commercial Contracts

CONVAIR - SU

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and
Expressa de Transportes Aerovias Brasil S/A
Sao Paulo, Brasil

*Revised Date: 22 June 1959

Date: 5 June 1959

SC No 880-14-3

Reference: (a) Letter 10-0-1724 and attachment, B. F.
Coggan to Alvarenga, dtd. 27 May 1959

WO No: 32,000 Series

(b) MCL's 71,032, 71,053, 71,065, 71,066, 71,067 and 71,070
MCL 71,062

CONVAIR 880 - REAL

REVISION TO AIRCRAFT INSTRUMENTS (COCKPIT)

- (1) REAL has accepted by Reference (a) revision to aircraft instruments (cockpit) arrangements as described in Reference (b). Accordingly, Engineering is authorized to proceed with the design of the above MCL's for the Model 31-14 aircraft.
- (2) Costs will be recovered from the customer as soon as firm prices are received from Engineering.

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JUN 25 '59

PROJECT
SPEC.
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HP-100s
*Revised to add to Ref. (b).

Man. Digges
for D. H. Digges

Manager of Commercial Contracts

Order No. 1655

11/18

REAL MINUTES

9 June 1959

No. 3

2 July 1959

Model 31-14

Reference: (a) Sales Order No. 880-14-3 dated 5 June 1959 , Revised 22 June 1959
(b) MCL's 71,052 - 71,053 - 71,065 - 71,066 - 71,067 and 71,070
71,062

REVISION TO AIRCRAFT INSTRUMENTS (COCKPIT)

REAL has accepted, as evidenced by reference (a), our proposal prepared in accordance with reference (b).

The task is as follows:

- (Ref. MCL 31-71,052) - The pilot's, co-pilot's and engine instruments shall be arranged as shown on the sketch entitled "REAL Arrangement, Model 31, Convair San Diego Division, R. Keck, 5/26/59".
- (Ref. MCL 31-71,053) - Remove C-10 Compass
Install C-11 Compass
No change in location, wiring or mounting.
- (Ref. MCL 31-71,065) - REAL has accepted our proposal to equip the pilot's, co-pilot's and center instrument panel with integrally lit instruments.
- (Ref. MCL 31-71,066) - Install cross switching arrangement between pilot's and co-pilot's for horizon directors and vertical gyros.
- (Ref. MCL 31-71,067) - A. Remove yaw damper tester from pilot's instrument panel and add standard instrument cut-out with blank cover plate.
B. Add standard instrument cut-out and blank cover plate to outboard center position on co-pilot's instrument panel.
C. Create and install one harness of three wires and revise one harness of three wires.
- (Ref. MCL 31-71,070) - A. Provide oxygen mask stowage and outlet connection at navigator/radio-operator station, outbd. side under instrument panel and at systems operators sta. under table at approx. Sta. 281. Add hole in systems operators sta. to run oxygen mask microphone lead to jack panel.
B. Delete smoke mask oxygen and microphone jack connection from pilot and co-pilot console. Smoke mask stowage provisions will remain in both consoles, but smoke masks (4) will be deleted from all crew stations.
C. Oxygen mask stowage as described in Item "A" will be shop made fiberglass container approximately 8.0" x 6.0" x 3.0".
D. Revise interphone wiring for oxygen mask microphone outlet connections as described in Item "A" by revising two harnesses by increasing length approx. 4 feet.

RECEIVED

JUL 8 '59

PROJECT
SPEC.
GROUP

9 June 1959

Rev. 2 July 1959

ACTION: All concerned are authorized to proceed with the above. Specifications Group to forward R.F.C. to Contracts for transmittal to the customer as soon as practicable.

J. T. Ready, Jr.
J. T. Ready, Jr.
Project Engineer
Mail Zone 6-115

6/4/59

JTR:JMC:rb

Task continued: Per MCL 31-71,062

- a) Installation of mike selector panel (TWA type)
- b) Installation of mike head set and boom mike jack panel (new)
- c) Installation of mike, head set, and boom mike set
- d) Installation of ground maintenance flight interphone switch (TWA type)

Ready 7/4/59

7/1/59

C O N V A I R
A Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

9 June 1959

No. 3

Model 31-14

Reference: (a) Sales Order No. 880-14-3 dated 5 June 1959
(b) MCL's 71,052 - 71,053 - 71,065 - 71,066 - 71,067 and 71,070

REVISION TO AIRCRAFT INSTRUMENTS (COCKPIT)

REAL has accepted, as evidenced by reference (a), our proposal prepared in accordance with reference (b).

The task is as follows:

- (Ref. MCL 31-71,052) - The pilot's, co-pilot's and engine instruments shall be arranged as shown on the sketch entitled "REAL Arrangement, Model 31, Convair San Diego Division, R. Keck, 5/26/59".
- (Ref. MCL 31-71,053) - Remove C-10 Compass
Install C-11 Compass
No change in location, wiring or mounting.
- (Ref. MCL 31-71,065) - REAL has accepted our proposal to equip the pilot's, co-pilot's and center instrument panel with integrally lit instruments.
- (Ref. MCL 31-71,066) - Install cross switching arrangement between pilot's and co-pilot's for horizon directors and vertical gyros.
- (Ref. MCL 31-71,067) - A. Remove yaw damper tester from pilot's instrument panel and add standard instrument cut-out with blank cover plate.
B. Add standard instrument cut-out and blank cover plate to outboard center position on co-pilot's instrument panel.
C. Create and install one harness of three wires and revise one harness of three wires.
- (Ref. MCL 31-71,070) - A. Provide oxygen mask stowage and outlet connection at navigator/radio-operator station, outbd. side under instrument panel and at systems operators sta. under table approx. Sta. 281. Add hole in systems operators sta. to run oxygen mask microphone lead to jack panel.
B. Delete smoke mask oxygen and microphone jack connection from pilot and co-pilot console. Smoke mask stowage provisions will remain in both consoles, but smoke masks (4) will be deleted from all crew stations.
C. Oxygen mask stowage as described in Item "A" will be shop made fiberglass container approximately 8.0" x 6.0" x 3.0".
D. Revise interphone wiring for oxygen mask microphone outlet connections as described in Item "A" by revising two harnesses by increasing length approx. 4 feet.
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CONVAIR-SD

REAL Minutes #3 Cont.

- 2 -

9 June 1959

ACTION: All concerned are authorized to proceed with the above. Specifications Group to forward R.F.C. to Contracts for transmittal to the customer as soon as practicable.


J. T. Ready, Jr.
Project Engineer
Mail Zone 6-115

6/10/59

JTR:JMC:rb

CONVAIR - SD

SALES ORDER

Sold to: REAL S/A-Transportes Aereos and Expressa
de Transportes Aerovias Brasil S/A
Sao Paulo, Brasil

Date: 2 June 1959

SO No: 880-14-2

Reference: (a) Letter 10-0-1724 and attachment
Coggan to Alvarenga, dated 27 May 1959
(b) MCL No. 31-71,051 dated 26 May 1959

WO No: 32,000 Series

CONVAIR 880 - REAL

REVISION TO AIRCRAFT INTERIOR ARRANGEMENT

- (1) REAL has accepted by reference (a), revisions to aircraft interior arrangements as described in reference (b) and shown in Convair Drawing No. 31-09123. Accordingly, Engineering is authorized to proceed with the design of the Model 31-14 aircraft.
- (2) Costs will be recovered from the customer as soon as firm prices are received from Estimating.

HEB:dm

Log No: 1474

[Signature]
D. H. Digges
Manager-Commercial Contracts

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PROJECT
SPEC.
GROUP

CONFIDENTIAL
A Division of General Dynamics Corporation
(San Diego)

No. 2
31-14

REAL Minutes
3 June 1959

Ref: (a). S.O. 880-14-2, dated 2 June 1959
(b) MCL No. 31-71,051, dated 26 May 1959

1. Revision to Aircraft Interior Arrangement.

REAL has accepted, as evidenced by reference (a), revision to aircraft interior arrangement as described in reference (b), MCL No. 31-71,051, and shown in Convair Drawing No. 31-09123.

ACTION: All concerned are directed to proceed with the above.

JTR:JMC:gm


J. T. Ready
Project Engineer

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TO: REAL S/A - Transcontinental Airlines Inc.
Empress of Transportation Aerobics Inc., S/A.
San Paulo, Brazil

Date: 26 March 1959
Revised: 26 May 1959
BY: 880-105-1

Reference: (a) Purchase Agreement dated 13 August 1958 as amended by Amendment #1
therein to be executed at a future date.

20 880-105-105 Series

(b) Name of Authorization: Memoir to Eastland dated 13 March 1959.

(c) Sales Order 880-0-105, revised 26 May 1959

TWO (2)
SALE OF ~~THREE (3)~~ CONVAIR MODEL 880 AIRCRAFT TO REAL S/A

- (1) Reference (a) Purchase Agreement covers the purchase by REAL S/A of three (3) Convair Model 880 aircraft to be manufactured in accordance with Detail Specification ZD-31-011 dated 15 August 1948, revised 15 October 1948 as amended by Change Order #2 dated 15 August 1948 and Change Order #3 dated 15 August 1948. Said aircraft are scheduled for delivery as follows:

<u>Month of Delivery</u>	<u>Number of Aircraft</u>
December 1960	1
February 1961	1
March 1961	1

- (2) In accordance with Reference (1) memo this Sales Order authorizes all departments concerned be provided as required with the design, release and manufacture of ~~two (2)~~ Convair Model 880 aircraft in accordance with the provisions of Paragraph (1) above, and as coordinated under Reference (c).
- (3) All departments are advised of the possibility of further changes being made to the contractual aircraft; notification of such will be made by revision to this Sales Order. This applies particularly to the interior configuration details.
- (4) Long Range Planning Department will notify all concerned of the Convair aircraft numbers assigned to the above aircraft. The point of delivery of said aircraft shall be San Diego, California. All expenses of or in connection with flight from San Diego, California shall be borne by the customer.
- (5) Spare Parts negotiations should be carried out by Service Parts in the usual manner.
- (6) The Customer Service Department and Flight Department shall prepare and deliver work handbooks, information and data in the quantities and at the times set out in Article 11 of the Purchase Agreement.
- (7) The Flight Department is authorized three (3) flying hours in order to demonstrate to Buyer the satisfactory functioning of each aircraft and to demonstrate compliance with the Detail Specification and performance guarantee.

C O N F I D E N T I A L
Division of General Dynamics Corporation
(San Diego)

REAL MINUTES

3 April 1959

Revised 5 June 1959

Revised 15 June 1959

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No. 1

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- Reference: (a). S. O. 880-14-1 dated 24 March 1959, ~~Revised 25 May 1959~~
(b). Purchase Agreement dated 13 August 1957 as amended by Amendment #3 thereto to be Executed at a Future Date.
(c). Memo of Authorization - Memorandum to Eastland dated 13 March 1959
(d). ~~S. O. 880-0-105, Revised 25 May 1959~~
~~Three ~~two~~ (2) (3)~~
SALE OF ~~THREE~~ (3) MODEL 880 AIRCRAFT TO REAL S/A

1. Reference (a) based on References (b) and (c) authorize the manufacture of ~~three~~ (3) Model 880 Aircraft in accordance with Detail Specification #ZD-31-011 dated 15 August 1958, revised 15 October 1958 as amended by Change Order #2 dated 15 August 1958 and Change Order #3 dated 15 August 1958. Said aircraft are scheduled for delivery as follows:

<u>Month of Delivery</u>	<u>Number of A/C</u>
December 1960	One (1)
February 1961	One (1)
March 1961 March 1961	One (1) One (1)

2. Items included in Change Orders Numbers 2 and 3 are as follows:

Change Order #2

- a. ~~Installation of Self-contained Starting System~~
- b. Installation of complete provisions for Dual DMET
- c. Installation of Tape Recorder
- d. Installation of complete provisions for Single Doppler
- e. Installation of Seat Tracks
- f. Overhead Life Raft stowage provisions
- g. Provisions for installation of Inflatable Escape Chutes
- h. Installation of Edo Loran
- i. Installation of Buffet Units
- j. Complete provisions for Dual HF Radio
- k. Installation of Life Vest stowage provisions
- l. Installation of 5 Bay Center Section Fuel

Change Order #1

- a. Installation of Leading Edge Slats
- b. Installation of Tail Bumper
- c. Increase in aircraft design weights to the following:

Maximum ramp weight:	204,000 lbs.
Maximum gross take-off weight	203,400 lbs.
Maximum Landing Weight:	155,000 lbs.
Zero Fuel Weight:	126,000 lbs.

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REAL MINUTES

3 April 1959

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No. 1
31-14

- 3 The initial release of these minutes is for the purpose of providing the current known information. However, the spec. and items marked with an asterisk, will require further negotiation with REAL. When they are resolved these Minutes will be revised accordingly. In all probability the aircraft will be the same as the Model 31-13.
 4. All concerned are authorized to consider these airplanes and proceed with design and release of engineering except for those items requiring further customer negotiations. Contact Project Office if in doubt.
- ~~"The flight test airplane under Sales Order 88-00105, Reference (a), will be assembled and prepared for delivery to REAL in the REAL configuration."~~

JTR:KVL:is


J. T. Rosdy, Jr.
Project Engineer

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